

REMARKS/ARGUMENT

I. General Remarks and Disposition of Claims.

Claims 113, 116, and 119-130 are pending in the present application.

Claims 1-112, 114, 117 and 118 were previously withdrawn in accordance with a previously issued restriction requirement, and have been cancelled herein. Applicant reserves the right to present claims 1-112, 114, 117 and 118 in one or more divisional applications.

Claims 113, 121-123, 125, 126, 129, and 130 have been amended herein. These amendments are fully supported by the Specification as originally filed, including, *inter alia*, paragraphs [0023], [0024], and [0039], and no new matter has been added.

Claim 115 has been cancelled herein.

II. Remarks Regarding Objections and Amendment to the Specification.

The Examiner has objected to the Specification as failing to provide proper antecedent basis for “the limitation in claim 120 wherein the treatment fluid does not comprise a surfactant.” (Office Action at 2.) Applicants have hereby cancelled claim 120. Accordingly, Applicants respectfully request that the Examiner withdraw the objection to the Specification.

Applicants have amended paragraph [0033] of the Specification to correct for a typographical error. No new matter has been added as a result of this amendment.

III. Remarks Regarding Rejections of Certain Claims As Indefinite Under 35 U.S.C. § 112.

Regarding claims 115, 121, 123, 125, 126, 129 and 130, the Examiner has deemed these claims to be “indefinite in being drawn to improper Markush groupings.” (Office Action at 2.) The Examiner further stated:

As noted in MPEP Section 2173.05(h), the use of the term “comprising” or “comprises” is improper in setting forth the Markush grouping. Accordingly, in lines 1 or 2 of each of these claims, or line 4 of claim 130, the transitional phrase “comprises” must be changed to, --is selected from the group consisting of-- or --is--.

(Office Action at 2.) Applicants have cancelled claim 115, and have amended claims 121, 123, 125, 126, 129 and 130 in accordance with the Examiner’s suggestion. Accordingly, Applicants respectfully request that the Examiner withdraw the rejections imposed under 35 U.S.C. 112.

Further regarding claim 120, the Examiner has deemed this claim indefinite “as it directly conflicts with parent claim 113 which clearly requires a surfactant. Thus the scope of claim 120 is unclear.” (Office Action at 2.) Claim 120 has been cancelled herein.

IV. Remarks Regarding Rejections of Certain Claims Under the Judicially-Created Doctrine of Obviousness-Type Double Patenting.

The Examiner has rejected claims 113, 116, and 120-130 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,715,553 to Reddy, *et al.* (hereinafter, “*Reddy*”). Submitted herewith is an appropriate terminal disclaimer in compliance with 37 C.F.R. § 1.321 disclaiming the appropriate term. Accordingly, Applicants respectfully submit that the double patenting rejections of claims 113, 116, and 120-130 have been overcome, and respectfully request the withdrawal of these rejections.

V. Remarks Regarding Rejections of Certain Claims Under 35 U.S.C. 102(b) As Anticipated By U.S. Patent No. 4,813,484 to Hazlett (hereinafter, “*Hazlett*”).

The Examiner has rejected claims 113, 116, 120, 121-123, and 126-130 under 35 U.S.C. 102(b) as anticipated by *Hazlett*. The Examiner has stated:

Hazlett (note col. 2, line 39 - col. 3, line 2; col. 3, lines 30-65; col. 5, lines 1-67) discloses a method of treating a subterranean formation by providing and injecting a lightweight well treatment fluid into the formation which includes a gas-generating agent for forming a gas in the treatment fluid, a surfactant for foaming the well treatment fluid. *Hazlett* may further include the gas-generating agent in an exemplary concentration range of “0.51% to about 5.0% by weight” which falls within the recited gas-generating chemical of independent claim 113, as well as the recited gas-generating chemical of claim 127.

As per claim 115, *Hazlett* discloses that an accelerator for the gas-generating chemical may be included in the well treatment fluid, including the use of a mineral acid for the gas-generating chemical “DNPT.” In this regard, it is deemed that *Hazlett* inherently includes hydrochloric acid, insofar as hydrochloric acid comprises a “mineral acid” by definition.

As per claim 116, insofar as the gas-generating chemical is present in the well treatment fluid within a preferred ranges of “0.05% to about 0.5% by weight,” and “0.51% to about 5.0% by weight,” it is deemed that the mineral acid accelerator, as noted above with

respect to claim 115, would inherently be present within a similar concentration range or at least less than or equal to 30% by weight.

As per claim 120, it appears that the embodiment of Hazlett set forth in col. 5, lines 1-21 does not require the presence of a surfactant, i.e., the beneficial effect on the formation is accomplished by the gas or “bubbles” yielded by the decomposing gas-generating agent.

As per claims 121 and 130, Hazlett (note col. 5, lines 50-67) may further include one or more of the recited components, such as an activator comprising a pH buffer and/or oxidizer.

As per claim 122, it appears that the gas-generating agent decompose during the injection and/or application of the well treatment fluid for treating the subterranean formation.

As per claim 123, the yielded gas appears to comprise nitrogen.

As per claim 126, the gas-generating agent or chemical of Hazlett comprises one or more of the Markush species recited, such as azodicarbonamide.

As per claims 128 and 129, Hazlett (note col. 3, lines 30-57) may utilize a mixture of foaming agents including one or more of those listed in claim 129. For example, the sulfated polyoxyalkylated alcohol surfactant foaming agent of Hazlett appears to correspond to the ethoxylated alcohol ether sulfate surfactant of claim 129.

(Office Action, at 4-5.) Applicants respectfully disagree, and respectfully assert that *Hazlett* does not teach or suggest every element of Applicants’ independent claim 113.

To anticipate a claim under 35 U.S.C. §102(b), a reference must teach or suggest each and every limitation of the subject claim. MANUAL OF PATENT EXAMINING PROCEDURE (hereinafter “MPEP”) § 2131. In particular, Applicants have amended the preamble of independent claim 113 to further clarify that the claimed method is “a method for treating a producing well,” and have amended the body of claim 113 to further clarify that the lightweight well treatment fluid is combined with fluids and/or solids in the producing well to enhance the removal of the fluids and/or solids therefrom. Nowhere does *Hazlett* disclose or suggest either of these limitations. To the contrary, rather than disclosing a method of treating a *producing* well, *Hazlett* is directed to *injection* wells in which a fluid is injected into a well bore so as to increase pressure in a region of a reservoir (*Hazlett*, Abstract; Col. 2, ll. 40-50; Col. 5, ll. 35-50). Accordingly, *Hazlett*’s disclosure, involving an aqueous medium containing a blowing agent that is injected into a formation through *injection* wells, teaches away from Applicants’ present

invention, which provides a method of treating *producing* wells that includes combining a lightweight well treatment fluid with fluids and/or solids in the *producing* well, to enhance removal of the fluids and/or solids from the *producing* well.

Accordingly, *Hazlett* does not disclose or suggest “a method for treating a producing well” as recited in the preamble of amended independent claim 113, nor does it disclose or suggest combining a lightweight well treatment fluid with fluids and/or solids in the *producing* well as recited in the body of amended independent claim 113, and thus *Hazlett* does not disclose or suggest every element of independent claim 113. Accordingly, Applicants respectfully submit that independent claim 113 is not anticipated by *Hazlett*. Moreover, since a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers,” and since claims 116, 120, 121-123, and 126-130 all depend, directly or indirectly, from claim 113, Applicants respectfully submit that these dependent claims are not anticipated by *Hazlett*. Applicants respectfully request the withdrawal of the outstanding rejections under 35 U.S.C. 102(b).

VI. Remarks Regarding Rejections of Certain Claims Under 35 U.S.C. § 103 As Unpatentable Over *Hazlett* in view of U.S. Patent No. 4,450,010 to Burkhalter et al. (hereinafter, “*Burkhalter*”).

The Examiner has rejected claims 124 and 125 under 35 U.S.C. 103(a) as unpatentable over *Hazlett* in view of *Burkhalter*. The Examiner has stated:

Hazlett teaches the methods of generating gas in and foaming a well fluid as applied to claims 1, 10, or 23 above. It is not taught that the well fluid further comprises a gas production rate enhancing agent. Burkhalter et al teach a method of generating gas in a well fluid similar to that of Hazlett. Burkhalter et al further teach that a gas production rate enhancing agent selected from the group of agents as currently claimed is added to the well fluid (see col. 3, lines 35-36).

Accordingly, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to add the enhancing agent taught by *Burkhalter* et al to the well fluid of *Hazlett*, since *Burkhalter* et al show that it was known in the art to add an enhancing agent to an already existent gas generating chemical in a well fluid (see col. 3, lines 29-36).

(Office Action at 6.) Applicants respectfully disagree, and respectfully submit that the Examiner has not established a *prima facie* case of obviousness, because the combination of *Hazlett* and

Burkhalter does not teach or suggest each and every limitation of claims 124 and 125. *See* MPEP § 2142. Applicants further submit that the Examiner has not shown that *Hazlett* could be combined with *Burkhalter* with a reasonable expectation of success.

First, the combination of *Hazlett* and *Burkhalter* does not teach each and every limitation of claims 124 and 125. The subject claims depend from independent claim 113, and as described in Section V. above, amended independent claim 113 recites “a method of treating a producing well,” and that the lightweight well treatment fluid is combined with fluids and/or solids in the *producing* well to thereby enhance the removal of the fluids and/or solids from the producing well. Rather than disclosing a method of treating a producing well, *Hazlett* is directed to the use of an aqueous medium containing a blowing agent that is injected into a formation through *injection* wells. *Burkhalter* is directed to a cementing composition, which does not constitute a method of *treating* a producing well. Accordingly, *Hazlett* in view of *Burkhalter* does not teach or suggest each and every limitation of claim 113. Because dependent claims 124 and 125 contain all the limitations of independent claim 113, from which claims 124 and 125 depend, the failure of the *Hazlett-Burkhalter* combination to teach or suggest all limitations of claim 113 prevents the combination from teaching or suggesting all limitations of claims 124 and 125.

Second, the Examiner has not shown that *Hazlett* could be combined with *Burkhalter* with a reasonable expectation of success. *See* MPEP § 2145(X)(D)(2) (“It is improper to combine references where the references teach away from the combination”). Applicants respectfully submit that the *Hazlett* and *Burkhalter* references cannot be combined, because *Hazlett* requires fluid communication between a well bore and a subterranean formation, while *Burkhalter* prevents such communication. *Burkhalter* teaches a well cementing process that *suppresses* or *controls* the flow of gas from the formation into the borehole (*Burkhalter*, Abstract; 1:12-21). In contrast, *Hazlett* not only teaches cement-free fluids, but teaches the injection of such fluids into an injection well, to permit such fluids subsequently to flow outward from the well bore into a subterranean formation. Accordingly, *Hazlett* and *Burkhalter* are not combinable. Indeed, the Examiner has shown no reason why one of ordinary skill in the art would be motivated to combine these references.

Therefore, the combination of *Hazlett* and *Burkhalter* fails to render claims 124 and 125 unpatentable. Accordingly, Applicants respectfully request withdrawal of the

outstanding rejection with respect to claims 124 and 125, and the timely issuance of a Notice of Allowance therefor.

**SUMMARY AND PETITION FOR THREE-MONTH EXTENSION OF TIME
TO FILE THIS RESPONSE**

In light of the above amendments and remarks, Applicant respectfully requests reconsideration and withdrawal of the outstanding objections and rejections. Applicant further submits that the application is now in condition for allowance, and earnestly solicits timely notice of the same. Should the Examiner have any questions, comments, or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile, or electronic mail.

Applicant's Response to this Office Action was due on December 7, 2005. Accordingly, Applicant has included herein a Petition for Three-Month Extension of Time to File this Response. The Commissioner is hereby authorized to charge Baker Botts L.L.P. Deposit Account No. 02-0383 (Order Number 063718.0716) for the fee of \$1,020.00 under 37 C.F.R. 1.136(a). Additionally, the Commissioner is hereby authorized to charge Baker Botts L.L.P. Deposit Account No. 02-0383 (Order Number 063718.0716) for any underpayment, or to credit same with any overpayment of fees, in association with this filing.

Respectfully submitted,



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Date: March 13, 2006